

REMARKS

The independent claims 1, 9, 18 and 26, along with dependent claims 2-7, 10-15, 17, 19-23, 25, 27-29 and 31, were rejected under 35 USC 102(b) as being anticipated by Coates. Dependent claims 8, 16, 24 and 30 were rejected under 35 USC 103(a) as being obvious based on Coates in view of Tuntunji. Claims 1, 9, 18 and 26 have been amended to clarify the claimed subject matter. These claim amendments have been discussed with the Examiner. Favorable reconsideration of this application is requested in view of the following remarks.

Examiner Interview

On March 10, 2004, a telephone interview was conducted between Kevin McEnaney and Examiner Vargas. The claim amendments made herein were discussed and were agreed to advance prosecution of this case. Examiner Vargas requested these amendments be filed in conjunction with an RCE application.

102 Rejection

Applicant has repeated below its arguments made in the previous Response for convenience. Applicant's claims now specifically recite molecular properties as consisting of molecular size distributions, molecular weight distributions and carbon number distributions.

Coates does not teach or suggest "calculating the molecular property for each constituent in the mixture...." Applicants discuss at page 6, paragraph 21, the basic difference between prior art NMR measurement techniques, such as Coates, and Applicants novel method. Specifically, Coates is similar to standard NMR uses, where NMR data is used to determine macroscopic properties of an earth formation, such as porosity and the presence or absence of hydrocarbons. However, Coates does not provide a detailed molecular analysis of properties of individual constituents, such as molecular size distributions, within a particular fluid. Instead, Coates proposes a method for obtaining measurements of relaxation time and diffusion properties of oil and water contained in the formation pores. (Coates, col. 14:11-17) This is distinguished from the claimed "molecular properties" such as molecular size and weight distributions and carbon number distributions determined from T1 and T2, or diffusion measurements. (Applicants' specification, page 12, paragraph 0036.)

CONCLUSION

Applicants believe this paper is fully responsive to each and every ground of rejection and objection cited by the Examiner in the Office Action, and respectfully request reconsideration of the application.

Please charge any applicable fees, or apply any excess, to deposit account number 19-0610.

Respectfully submitted,



Kevin P. McEnaney, Reg. No. 46,258

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Date

Schlumberger Technology Corporation
Office of Patent Counsel
200 Gillingham Lane, MD 200-9
Sugar Land, TX 77478
Telephone: 281-285-7325
Facsimile: 281-285-4232